

REMARKS

Claims 19-35 are active. Claim 19 finds support in original claims 10 and 11. Claims 20-27 respectively track claims 3, 4, 12, 13, 14, 15, and 16. In claim 22, the limitation “0.08 to 0.36 kg of AlCl₃/m³ of gas” finds support on page 6, lines 5 and 9, where 0.08 = 0.4 x 0.2 and 0.36 = 0.6 x 0.6. Claim 28 finds support in original claim 17. Claims 29-35 find support in the specification in the sections bridging pages 2-3 and 6-7 as well as in original claims 15-18. No new matter is believed to have been added respectfully and allowance of the claims is earnestly solicited.

Restriction/Lack of Unity/Election

The Applicants previously elected with traverse **Group I**, claims 1-11, directed to aluminum oxide. The requirement has been made FINAL. The Applicants respectfully request that the claims of the nonelected group(s) or other withdrawn subject matter which depend from or otherwise include all the limitations of an allowed elected claim, be rejoined upon an indication of allowability for the elected claim, see MPEP 821.04.

Rejection—35 U.S.C. §103(a)

Claims 1, 3 and 5-7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nargiello, et al., U.S. Patent No. 6,193,795. This rejection is moot in view of the cancellation of the prior claims. It would not apply to independent claim 19 because, among other reasons, Nargiello does not disclose or suggest an aluminum oxide powder having a BET surface area ranging from 135 to 190 m²/g. Rather, as shown in the Official Action (“OA”) the Nargiello powder has a BET surface area ranging from 80-120.

Rejection—35 U.S.C. §103(a)

Claims 1-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Meyer, et al., U.S. Patent No. 6,743,269, in view of Mangold, et al., U.S. Patent No. 6,063,354. This rejection is moot in view of the cancellation of the prior claims. It would not apply to new independent claim 19. Meyer admittedly is “silent that the aluminum oxide has the property. . .set forth in the instant application” (OA, page 4, lines 5-6.

Mangold was relied upon for disclosing a process of making a metal oxide by flame hydrolysis controlling the hydrogen and oxygen ratios at respective lambda and gamma ratios below 1. This is a very special case since it shows that the hydrogen and oxygen were fed to the reactor in below the stoichiometric value, or under hydrogen- and oxygen “lean” conditions.

In distinction to Mangold, the process of the invention requires a different chemical reaction characterized by stoichiometric or hydrogen- or oxygen-rich conditions. While values of less than 1 as disclosed by Mangold, and values of 1 or more required by the invention may be numerically close, they describe quite different types of chemical reactions.

In view of this, the Mangold disclosure would not have motivated one of ordinary skill in the art to produce a high BET alumina powder using stoichiometric or hydrogen- and oxygen-rich conditions. Mangold teaches the opposite—hydrogen- or oxygen-lean conditions. Moreover, as evident from Mangold, the BET of the exemplified silica powders were well below 100 m²/g which may be reasonable values for a process using the lean Mangold conditions characterized by lambda and gamma values of less than 1. For alumina,

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instead of silica, even lower BET numbers would be expected. For these reasons, this rejection would not apply to the new claims.

Conclusion

In view of the amendments and remarks above, the Applicants respectfully submit that this application is now in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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